

SEQUENCE LISTING



<110> FERSHT, Alan R.
ZAHN, Ralph
ALTAMIRANO, Myriam M.

<120> CHAPERONE FRAGMENTS

<130> 674508-2001

<140> 09/276,455

<141> 1999-03-25

<150> 97/02652

<151> 1997-09-26

<150> 96/020980

<151> 1996-12-03

<150> 9620243.7

<151> 1996-09-26

<160> 14

<170> PatentIn Ver. 2.1

<210> 1

<211> 27

<212> DNA

<213> Escherichia coli

<400> 1

cggatccgaa ggtatgcagt tcgaccg

27

<210> 2

<211> 30

<212> DNA

<213> Escherichia coli

<400> 2

cgaattctta aacgccgcct gccagtttcg

30

<210> 3

<211> 31

<212> DNA

<213> Escherichia coli

<400> 3
cgaattctta acggccctgg attgcagctt c 31

<210> 4
<211> 35
<212> DNA
<213> Escherichia coli

<400> 4
cgaattctta acccagcca tcgatgatag tgggtg 35

<210> 5
<211> 42
<212> DNA
<213> Escherichia coli

<400> 5
cgaattctta gtctttgttg atcacaacac gtttagcctg ac 42

<210> 6
<211> 36
<212> DNA
<213> Escherichia coli

<400> 6
cgaattctta acgttttagcc tgaccaggt ctcca 36

<210> 7
<211> 34
<212> DNA
<213> Escherichia coli

<400> 7
cgaattctta accgccagtc agggttgcga tatc 34

<210> 8
<211> 36
<212> PRT
<213> Escherichia coli

<400> 8
Met Arg Gly Ser His His His His His His Gly Met Ala Ser Met Thr

1 5 10 15
 Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Leu Val
 20 25 30

Pro Arg Gly Ser
 35

<210> 9
 <211> 186
 <212> PRT
 <213> Escherichia coli

<400> 9
 Glu Gly Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile Asn
 1 5 10 15

Lys Pro Glu Thr Gly Ala Val Glu Leu Glu Ser Pro Phe Ile Leu Leu
 20 25 30

Ala Asp Lys Lys Ile Ser Asn Ile Arg Glu Met Leu Pro Val Leu Glu
 35 40 45

Ala Val Ala Lys Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val
 50 55 60

Glu Gly Glu Ala Leu Ala Thr Leu Val Val Asn Thr Met Arg Gly Ile
 65 70 75 80

Val Lys Val Ala Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg Lys
 85 90 95

Ala Met Leu Gln Asp Ile Ala Thr Leu Thr Gly Gly Thr Val Ile Ser
 100 105 110

Glu Glu Ile Gly Met Glu Leu Glu Lys Ala Thr Leu Glu Asp Leu Gly
 115 120 125

Gln Ala Lys Arg Val Val Ile Asn Lys Asp Thr Thr Thr Ile Ile Asp
 130 135 140

Gly Val Gly Glu Glu Ala Ala Ile Gln Gly Arg Val Ala Gln Ile Arg
 145 150 155 160

Gln Gln Ile Glu Glu Ala Thr Ser Asp Tyr Asp Arg Glu Lys Leu Gln
 165 170 175

Glu Arg Val Ala Lys Leu Ala Gly Gly Val
180 185

<210> 10
<211> 548
<212> PRT
<213> Escherichia coli

<400> 10
Met Ala Ala Lys Asp Val Lys Phe Gly Asn Asp Ala Arg Val Lys Met
1 5 10 15

Leu Arg Gly Val Asn Val Leu Ala Asp Ala Val Lys Val Thr Leu Gly
20 25 30

Pro Lys Gly Arg Asn Val Val Leu Asp Lys Ser Phe Gly Ala Pro Thr
35 40 45

Ile Thr Lys Asp Gly Val Ser Val Ala Arg Glu Ile Glu Leu Glu Asp
50 55 60

Lys Phe Glu Asn Met Gly Ala Gln Met Val Lys Glu Val Ala Ser Lys
65 70 75 80

Ala Asn Asp Ala Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala
85 90 95

Gln Ala Ile Ile Thr Glu Gly Leu Lys Ala Val Ala Ala Gly Met Asn
100 105 110

Pro Met Asp Leu Lys Arg Gly Ile Asp Lys Ala Val Thr Ala Ala Val
115 120 125

Glu Glu Leu Lys Ala Leu Ser Val Pro Cys Ser Asp Ser Lys Ala Ile
130 135 140

Ala Gln Val Gly Thr Ile Ser Ala Asn Ser Asp Glu Thr Val Gly Lys
145 150 155 160

Leu Ile Ala Glu Ala Met Asp Lys Val Gly Lys Glu Gly Val Ile Thr
165 170 175

Val Glu Asp Gly Thr Gly Leu Gln Asp Glu Leu Asp Val Val Glu Gly
180 185 190

Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile Asn Lys Pro
195 200 205

Glu Thr Gly Ala Val Glu Leu Glu Ser Pro Phe Ile Leu Leu Ala Asp
 210 215 220

Lys Lys Ile Ser Asn Ile Arg Glu Met Leu Pro Val Leu Glu Ala Val
 225 230 235 240

Ala Lys Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly
 245 250 255

Glu Ala Leu Ala Thr Leu Val Val Asn Thr Met Arg Gly Ile Val Lys
 260 265 270

Val Ala Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg Lys Ala Met
 275 280 285

Leu Gln Asp Ile Ala Thr Leu Thr Gly Gly Thr Val Ile Ser Glu Glu
 290 295 300

Ile Gly Met Glu Leu Glu Lys Ala Thr Leu Glu Asp Leu Gly Gln Ala
 305 310 315 320

Lys Arg Val Val Ile Asn Lys Asp Thr Thr Thr Ile Ile Asp Gly Val
 325 330 335

Gly Glu Glu Ala Ala Ile Gln Gly Arg Val Ala Gln Ile Arg Gln Gln
 340 345 350

Ile Glu Glu Ala Thr Ser Asp Tyr Asp Arg Glu Lys Leu Gln Glu Arg
 355 360 365

Val Ala Lys Leu Ala Gly Gly Val Ala Val Ile Lys Val Gly Ala Ala
 370 375 380

Thr Glu Val Glu Met Lys Glu Lys Lys Ala Arg Val Glu Asp Ala Leu
 385 390 395 400

His Ala Thr Arg Ala Ala Val Glu Glu Gly Val Val Ala Gly Gly Gly
 405 410 415

Val Ala Leu Ile Arg Val Ala Ser Lys Leu Ala Asp Leu Arg Gly Gln
 420 425 430

Asn Glu Asp Gln Asn Val Gly Ile Lys Val Ala Leu Arg Ala Met Glu
 435 440 445

Ala Pro Leu Arg Gln Ile Val Leu Asn Cys Gly Glu Glu Pro Ser Val
 450 455 460

Val Ala Asn Thr Val Lys Gly Gly Asp Gly Asn Tyr Gly Tyr Asn Ala
 465 470 475 480

Ala Thr Glu Glu Tyr Gly Asn Met Ile Asp Met Gly Ile Leu Asp Pro
 485 490 495

Thr Lys Val Thr Arg Ser Ala Leu Gln Tyr Ala Ala Ser Val Ala Gly
 500 505 510

Leu Met Ile Thr Thr Glu Cys Met Val Thr Asp Leu Pro Lys Asn Asp
 515 520 525

Ala Ala Asp Leu Gly Ala Ala Gly Gly Met Gly Gly Met Gly Gly Met
 530 535 540

Gly Gly Met Met
 545

<210> 11

<211> 160

<212> PRT

<213> Escherichia coli

<400> 11

Val Glu Gly Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile
 1 5 10 15

Asn Lys Pro Glu Thr Gly Ala Val Glu Leu Glu Ser Pro Phe Ile Leu
 20 25 30

Leu Ala Asp Lys Lys Ile Ser Asn Ile Arg Glu Met Leu Pro Val Leu
 35 40 45

Glu Ala Val Ala Lys Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp
 50 55 60

Val Glu Gly Glu Ala Leu Ala Thr Leu Val Val Asn Thr Met Arg Gly
 65 70 75 80

Ile Val Lys Val Ala Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg
 85 90 95

Lys Ala Met Leu Gln Asp Ile Ala Thr Leu Thr Gly Gly Thr Val Ile
 100 105 110

Ser Glu Glu Ile Gly Met Glu Leu Glu Lys Ala Thr Leu Glu Asp Leu

115	120	125
Gly Gln Ala Lys Arg Val Val Ile Asn Lys Asp Thr Thr Ile Ile		
130	135	140
Asp Gly Val Gly Glu Glu Ala Ala Ile Gln Gly Arg Val Ala Gln Ile		
145	150	155 160

<210> 12
 <211> 42
 <212> PRT
 <213> Escherichia coli

<220>
 <221> VARIANT
 <222> (1)
 <223> Amino acid 1 is Ile, Met, Leu, Val, Ser, Phe or
 Ala

<220>
 <221> VARIANT
 <222> (5)
 <223> Amino acid 5 is Ile, Leu, Val, Pro or Ala

<220>
 <221> VARIANT
 <222> (8)
 <223> Amino acid 8 is Leu, Glu, Val, His or Ile

<220>
 <221> VARIANT
 <222> (9)
 <223> Amino acid 9 is Glu, Ala, Arg, Leu, Gln or Asn

<220>
 <221> VARIANT
 <222> (12)
 <223> Amino acid 12 is Ala, Val, Ile, Met, Leu, Asn,
 Ser, Arg, Thr, Gln or Lys

<220>
 <221> VARIANT
 <222> (28)
 <223> Amino acid 28 is Glu, Asp or Gly

<220>
<221> VARIANT
<222> (31)
<223> Amino acid 31 is Ala, Pro, Ser, Thr, Gly, or Leu

<220>
<221> VARIANT
<222> (32)
<223> Amino acid 32 is Thr, Ala, Asn, Ser, or Val

<220>
<221> VARIANT
<222> (34)
<223> Amino acid 34 is Val, Leu, Ile, or Ala

<220>
<221> VARIANT
<222> (35)
<223> Amino acid 35 is Val, Leu, Ile, Phe or His

<220>
<221> VARIANT
<222> (36)
<223> Amino acid 36 is Asn, Ser, or Leu

<220>
<221> VARIANT
<222> (39)
<223> Amino acid 39 is Arg, Lys, Asn, Gln, Leu or Ser

<220>
<221> VARIANT
<222> (41)
<223> Amino acid 41 is Ile, Thr, Ser, Gly, Val, Ala,
Gln, Asn, Lys, Phe or Pro

<220>
<221> VARIANT
<222> (42)
<223> Amino acid 42 is Val, Ile, Leu, Phe, Asp or Thr

<220>
<221> VARIANT
<222> (2)..(4)
<223> Represents any amino acid or peptide bond

<220>

<221> UNSURE
<222> (6)..(7)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (10)..(11)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (13)..(27)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (29)..(30)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (33)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (37)..(38)
<223> represents any amino acid or peptide bond

<220>
<221> VARIANT
<222> (40)
<223> represents any amino acid or peptide bond

<400> 12
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40

<210> 13
<211> 42
<212> PRT

<213> Escherichia coli

<220>

<221> VARIANT

<222> (1)..(42)

<223> Xaa represents any amino acid or peptide bond

<400> 13

Ile Xaa Xaa Xaa Leu Xaa Xaa Leu Glu Xaa Xaa Ala Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Xaa Ala Thr
20 25 30

Xaa Val Val Asn Xaa Xaa Arg Xaa Ile Val
35 40

<210> 14

<211> 14

<212> PRT

<213> Escherichia coli

<220>

<221> VARIANT

<222> (3)

<223> Amino acid 3 may also be Val

<220>

<221> VARIANT

<222> (4)

<223> Amino acid 4 may also be Val

<220>

<221> VARIANT

<222> (6)

<223> Amino acid 6 may also be Ser

<220>

<221> VARIANT

<222> (9)

<223> Amino acid 9 may also be Ile

<400> 14

Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly Glu Ala Leu
1 5 10